CLAIMS

What is claimed is:

1. A method of performing laser milling comprising:

determining a tool path for ablating a layer of material from an exposed surface of a workpiece with a laser; and

ablating a layer of material from an exposed surface of the workpiece with a laser according to the tool path,

wherein the tool path describes a substantially constant arc speed.

2. The method of claim 1 further comprising communicating the tool path to a control system operable to affect a traversal of the exposed surface of the workpiece with the laser according to the tool path.

3. The method of claim 2, wherein said determining a tool path corresponds to formulating a radius and a local angular speed.

4. The method of claim 3, wherein the radius is controlled as a function of voltage output to a PZT scan mirror of a laser system operated by the control system, and wherein said determining a tool path comprises determining an initial voltage.

5. The method of claim 4, wherein the radius is variable according to a tool pitch that corresponds to a decrease in voltage per revolution, and wherein said determining a tool path comprises determining a tool pitch based on a spot size of the laser system.

6. The method of claim 3, wherein the control system is operable to modify the angular speed as a function of radius, thereby accomplishing the substantially constant arc speed.

7. The method of claim 3 further comprising modifying the tool path to accomplish removal of successive layers of material from a newly exposed surface of the workpiece, wherein the successive layers of material respectively decrease in area, thereby affecting a desired contour in the laser milled workpiece.

8. The method of claim 7, wherein said modifying corresponds to decreasing the radius and increasing the local angular speed.

9. The method of claim 1 further comprising simultaneously performing ablation of multiple workpieces according to the tool path, wherein ablated regions of each workpiece is composed of substantially identical material and has substantially identical geometric characteristics.

10. The method of claim 1 further comprising simultaneously performing ablations of multiple regions of a workpiece according to the tool path, wherein each of said multiple regions is composed of substantially identical material and has substantially identical geometric characteristics.

11. A laser milling system comprising:

a tool path module operable to determine a tool path for ablating a layer of material from an exposed surface of a workpiece with a laser, wherein the tool path describes a substantially constant arc speed;

a plurality of lasers operable to perform ablation of a plurality of workpieces according to the tool path; and

a control module operable to ablate a layer of material from an exposed surface of the workpiece with a laser according to the tool path.

12. The system of claim 11, wherein said tool path module is operable to formulate a radius and a local angular speed.

13. The system of claim 12, wherein said control module is operable to control the radius as a function of voltage output to a PZT scan mirror of the plurality of lasers, and wherein said tool path module is operable to determine an initial voltage.

14. The system of claim 13, wherein said control module is operable to vary the radius according to a tool pitch that corresponds to a decrease in voltage per revolution, and wherein said tool path module is operable to determine a tool pitch based on a spot size of the plurality of lasers.

15. The system of claim 12, wherein said control module is operable to control the angular speed as a function of radius, thereby accomplishing the substantially constant arc speed.

16. The system of claim 12, wherein said control module is operable to modify the tool path to accomplish removal of successive layers of material from a newly exposed surface of the workpiece, wherein the successive layers of material respectively decrease in area, thereby affecting a desired contour in the laser milled workpiece.

17. The system of claim 16, wherein said control module is operable to modify the tool path by decreasing the radius and increasing the local angular speed.

18. The system of claim 11 further comprising simultaneously performing ablation of multiple workpieces according to the tool path, wherein ablated regions of each workpiece is composed of substantially identical material and has substantially identical geometric characteristics.

19. The system of claim 11 further comprising simultaneously performing ablations of multiple regions of a workpiece according to the tool path, wherein each of said multiple regions is composed of substantially identical material and has substantially identical geometric characteristics.

20. A laser-milled workpiece comprising a workpiece layer having an aperture formed therein via laser ablation of workpiece material, wherein the laser ablation is performed by a laser drilling system driving a laser beam according to a tool path across a surface of said workpiece layer, wherein the tool path has a constant arc speed.

21. The workpiece of claim 20, wherein said workpiece layer is further defined as an inkjet nozzle plate, and the aperture is further defined as an inkjet nozzle.

22. An inkjet head having the inkjet nozzle of claim 21.

23. An inkjet printer having the inkjet head of claim 22.